What is claimed is:

1. A method of forming a dielectric film on a semiconductor substrate comprising:

depositing a first layer of undoped ozone and TEOS film on a semiconductor substrate having a plurality of polysilicon conductors on a top surface thereof, the first layer of film having an ozone and TEOS volume ratio that is at least 15 to 1;

depositing a second layer of low ozone doped BPSG film over the first layer of film;

applying a heat treatment to the first and second layers of film; and

planarizing the second layer of film such that the second layer is of a thickness of at least 200 nm over the polysilicon conductors.

2. The method of claim 1, wherein the first film layer has a thickness ranging from 100 nm to 400 nm.

3. The method of claim 1, wherein the second film layer has a thickness of at least 500 nm.

4. The method of claim 1, wherein the heat treatment is carried out at a temperature of at least 700° C.

5. The method of claim 1, wherein the second film layer has a boron weight percentage ranging from zero to 4 percent.

6. The method of claim 1, wherein the second film layer has a phosphorous weight percentage not exceeding 6 percent.

7. The method of claim 1, wherein the first film layer has an ozone concentration ranging from 120 g/m^3 to 140 g/m^3.

8. A method of forming a dielectric film on a semiconductor substrate comprising:

depositing a first layer of undoped ozone and TEOS film on a semiconductor substrate, the first layer of film having a thickness ranging from 100 nm to 400 nm and wherein the ozone and TEOS volume ratio of the first film layer is at least 15 to 1;

depositing a second layer of low ozone doped BPSG film over the first layer of film, the second layer of film having a thickness of at least 500 nm, a boron weight percentage ranging from zero to four percent, and a phosphorous weight percentage ranging from four to six percent;

applying a heat treatment to the first and second layers of film; and

planarizing the second layer of film.

9. The method of claim 8, wherein the heat treatment is carried out at a temperature of at least 700° C.

10. The method of claim 9, wherein the heat treatment is carried out at a temperature of less than 800° C.

11. The method of claim 9 wherein the semiconductor substrate has a plurality of polysilicon conductors on a top surface thereof and wherein the second layer of film is planarized to be of a thickness of at least 200 nm above the polysilicon conductors.

12. A method of forming a semiconductor device, comprising:

forming a diffusion layer and a polysilicon conductor on a silicon substrate surface,

depositing a first layer of undoped ozone and TEOS film on the substrate surface, the first layer of film having an ozone/TEOS volume ratio that ranges from at least 15 to 1 to about 17 to 1, and a thickness ranging from 100 nm to 400 nm;

depositing a second layer of low ozone doped BPSG film over the first layer of film, the second film layer having a thickness of at least 500 nm;

planarizing the second layer of film to a thickness of at least 200 nm above the polysilicon conductor;

forming openings through the first and second film layers to expose a portion of each of the diffusion layer and the polysilicon conductor; and

forming wiring conductors in the first and second film layers, the wiring conductors being electrically connected through the openings to the diffusion layer and to the polysilicon conductor.

13. The method of claim 12, wherein the heat treatment is carried out at a temperature not greater than 850° C.

14. The method of claim 12, wherein the second film layer has a boron weight percentage ranging from zero to 4 percent.

15. The method of claim 12, wherein the second film layer has a phosphorous weight percentage not exceeding 6 percent.

16. The method of claim 12, wherein the first film layer has an ozone concentration ranging from 120 g/m^3 to 140 g/m^3.

17. A method of forming an insulation layer over a pair of polysilicon buses comprising:

depositing a first layer of undoped ozone and TEOS film on a pair of polysilicon buses, the first layer of film having an ozone and TEOS volume ratio of at least 15 to 1;

depositing a second layer of low ozone doped BPSG film over the first layer of film, the second layer of film having a thickness of at least 500 nm, a boron weight percentage ranging from zero to four percent, and a phosphorous weight percentage not exceeding six percent;

applying a heat treatment to the first and second layers of film; and

planarizing the second layer of film such that the thickness of the second layer is at least 200 nm over the pair of polysilicon buses.

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